

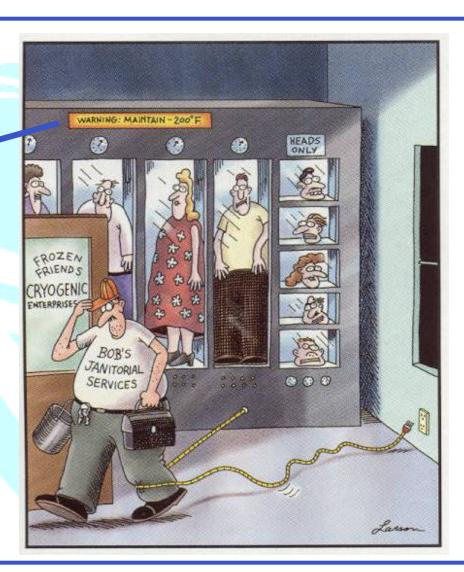
Plasma for Fractionation: A Fractionator's Perspective

FDA's Plasma Standards Workshop August 31, 2004

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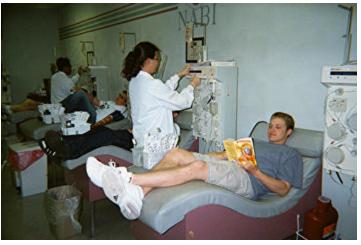
Warning: A Maintain -200°F





Nature of starting material

- People For People
- Each unit is unique
- Critical safeguards
 - Screening
 - Robust manufacturing processes
- High costs and ethical responsibility towards donors

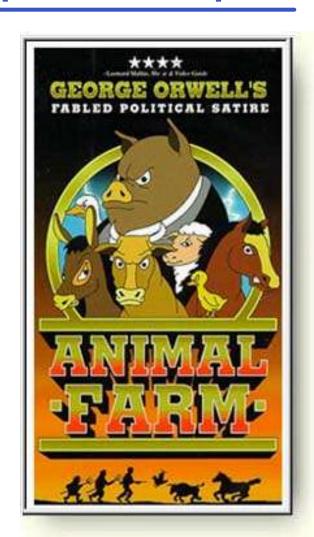






"All plasma is equal"

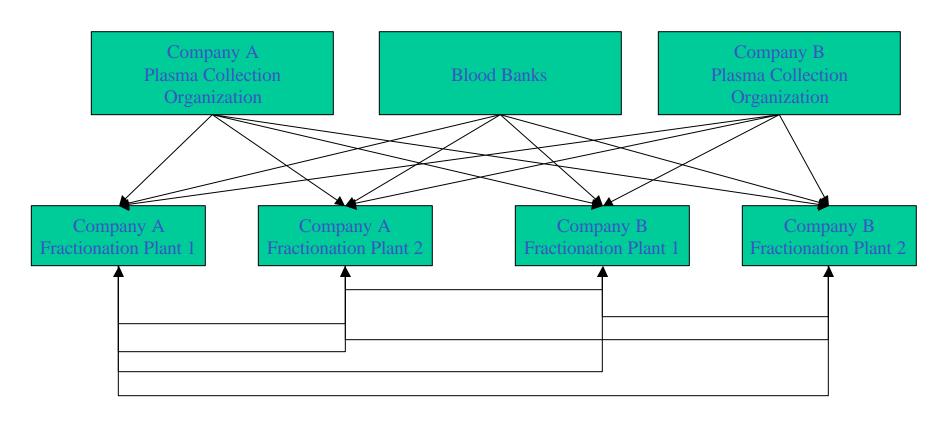
- Basic Quality measures assure Quality of starting material
- Fractionator's Quality measures maintain, and assure Quality of starting material throughout manufacturing process
- "Perceived" Quality of various plasma sources varies greatly from market to market





Global network of supply

Complex relationships between various parties





Mature Quality systems

Quality Systems exist to maintain Quality of starting Material and final products

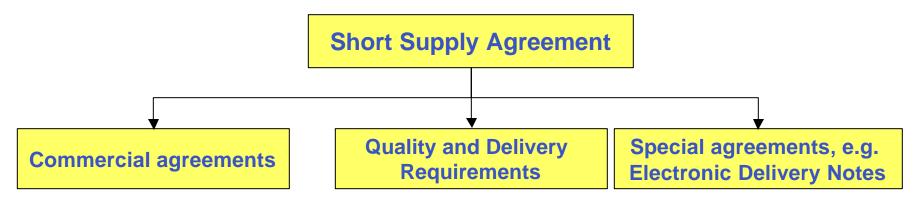
- CFR, Pharmacopoeias
- Council Recommendations (EU), Guidelines
- cGMP's
- Industry standards
- Quality agreements between different parties



Short supply agreements

Short Supply Agreements

- reference to 21 CFR601.22
- contractual framework document for all additional agreements





Quality and Delivery Requirements

Quality and Delivery Requirements

- General Definitions
- Quality
 - Donor selection and blood donation
 - Collection, processing, storage and transport
 - Plasma specifications
 - Post-collection measures
 - Plasma containers
 - Labeling
- Manufacturing plant
- Compliance and inspection
- Shipping documents
- References



Do we have to develop additional standards for the preparation, labeling, storage and shipping of plasma in order to ensure the safety, purity, and potency of the therapeutically products?



Risk based approach

Pharmaceutical cGMP'S for the 21st Century — A Risk-Based Approach:
Second Progress Report and Implementation Plan

.... To encourage implementation of risk-based approaches that focus both industry and Agency attention on critical areas

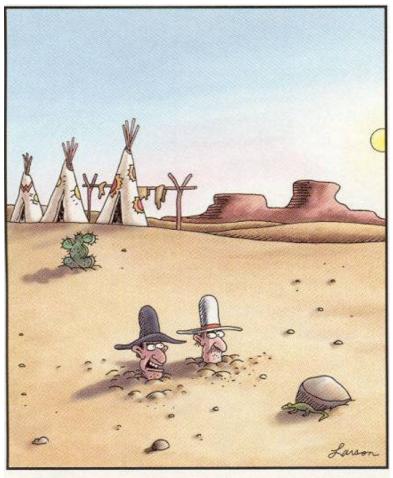


- Basic regulations for freezing/storage/transportation to ensure Quality of final products exist
- Products have been manufactured for decades (> 20 years).
- Immunoglobulin, Albumin
 - Freezing/storage/transport conditions somewhat less significant for Quality of final products
 - Microbiological baseline control has to be taken into consideration



- Factor products
 - Time to freezing should be minimized in order to avoid activation/yield loss
 - Once plasma is frozen, temperature (storage, transport) has minor impact on final product Quality





"Hey, Frank ... nice and cool here in the shade ... yesiree ... niiiiiiice and cool."



- cGMP's require establishment of clear relationships between different supply parties, this includes (not all inclusive)
 - Establishment of delivery requirement
 - Establishment of specification
 - Audits
- Review of Recalls/Withdrawals published on CBER homepage: No recalls in the last 4 years due to inadequate temperature regulations





Harmonization

- e.g. to allow global utilization of plasma sources
- Harmonization has to be guided by scientific principles
- Regulatory activities should be focused around basic Quality, Safety and Efficacy issues





Economics of Industry

- Innovation
- Efficiency gains
- Reimbursement Improvement
- Sustainable prices
- Regulatory harmonization

- Flat prices
- Price & reimbursement pressure
- Increasing plasma cost
- Safety & quality costs



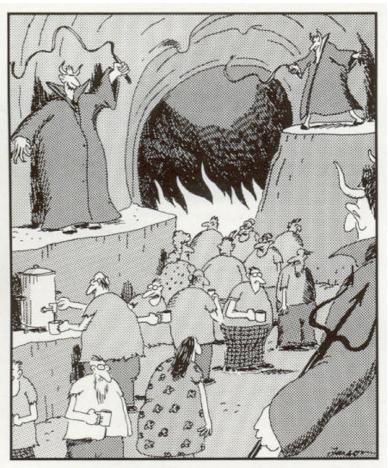


Today's standards are adequate for the preparation, labeling, storage and shipping of plasma to ensure the safety, purity, and potency of the products

Focus both industry and agency attention on more critical areas



Conclusions



"Oh, man! The coffee's cold! They thought of everything!"